UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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ART UNIT	PAPER NUMBER
2124	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/827,030	PATEL ET AL.
	Examiner	**Art Unit**	
	Trent J Roche	2124	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>05 April 2001</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-66* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-66* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>05 April 2001</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>10032003</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

1.   This office action is responsive to communications filed 05 April 2001.

2.   Claims 1-66 have been examined.

Specification

3.   Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4.   The abstract of the disclosure is objected to because it exceeds the maximum length of 150 words. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6.   Claims 1-66 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,374,402 to Schmeidler et al, hereafter referred to as Schmeidler.

Regarding claim 1:

Schmeidler teaches:

- a process for installing a streamed application program on a client system and executing said streamed application program on said client while concurrently streaming portions of said streamed application program from a server in a computer environment (Note at least Figures 2a and 2b and the corresponding sections of the disclosure)

- receiving an installation information block for said streamed application program from said server ("retrieving the requested blocks of briq data from the RAFT server…the SCDP client software creates an installation abstraction…" in col. 3 lines 2-9)

- providing file redirection means on said client for redirecting file accesses from said client's local file system to the streaming server's file system ("The launcher and ARFSD VxD mount the file system…a facility within the file manager…allows the file directory and content of a remotely located file to be "mounted" or accessed over a computer network, thereby creating a "virtual drive" from which data can be accessed" in col. 16 lines 14-22.)

- providing a file mapping database stored persistently on said client, wherein said file mapping database contains a bi-directional mapping of the client file system to the streaming server file system, wherein said file mapping database is updated with said streamed application program's file mapping data obtained from said installation information, wherein said file redirection means performs said redirection using said file mapping database (Note Figure 6 and the corresponding sections of the disclosure. "The launcher and ARFSD VxD mount the file system…a facility within the file manager…allows the file directory and content of a remotely located file to be "mounted" or accessed over a computer network,

thereby creating a "virtual drive" from which data can be accessed" in col. 16 lines 14-22. The remote mapping facility in the file manager would inherently contain a database to keep track of locations in the remote drive.)

- providing registry interception means on said client for intercepting all registry calls on said client and redirecting calls that manipulate certain registries to an alternate path (Note at least Figure 6, items 602 and 608 and the corresponding sections of the disclosure)

- providing a registry database stored persistently on said client (Note at least Figure 6, item 602 and the corresponding section of the disclosure)

- wherein said registry database contains mappings of original registry paths to new alternate registry paths, wherein said registry database is updated with said streamed application program's registry mapping data obtained from said installation information, wherein said registry interception means uses said registry database to redirect registry calls ("the launcher and ARFSD VxD mount the file system…and store the associated registry entries on the local drive…" in col. 16 lines 14-16. Further, "the ARFSD VxD starts intercepting such operating requests…the calls, where applicable, are satisfied with entries from the list of registry entries stored locally…" in col. 16 lines 43-46. Note Figure 6 and the corresponding sections of the disclosure.)

- providing an application page cache on said client ("the SCDP client creates a directory for local storage under the SCDP install directory" in col. 17 lines 20-21)

- providing application page prefetching means on said client for requesting application pages of said streamed application from said server ("the VxD retrieves the data blocks from the RAFT server in a read-ahead manner and caches the datablocks…" in col. 15 lines 14-15)

- wherein said application page prefetching means initially populates said application page cache with an initial set of application pages when said stream application program is installed on said client, said initial set of application pages are specified in said installation information ("the creator program combines the selected files and other information and generates as an output a file system in the form of a briq…" in col. 16 lines 2-4. Further, "mounting of the file system may result in caching all or a portion of the data blocks from a briq which contain the title content…" in col. 16 lines 25-27)

- installing the proper icons, aliases, and description onto said client that give the user the proper look and feel of the original application program ("a graphic user interface (GUI) is presented to a user…present graphic information within such windows, and receive commands from a user via a keyboard, mouse…" in col. 11 lines 17-25)

substantially as claimed.

Regarding claim 2:

The rejection of claim 1 is incorporated, and further, Schmeidler discloses generating page requests, said application page prefetching means requests application pages from said server that are not resident in said application page cache and places the pages in the cache as claimed ("the VxD retrieves the data blocks from the RAFT server in a read-ahead manner and caches the datablocks…" in col. 15 lines 14-15)

Regarding claim 3:

The rejection of claim 1 is incorporated, and further, Schmeidler discloses prefetching additional application pages that said streamed application program may need in the future from said server

and placing them in the cache, and wherein the additional application pages are selected based on application page profiling data obtained from the installation information as claimed ("the VxD retrieves the data blocks from the RAFT server in a read-ahead manner and caches the datablocks..." in col. 15 lines 14-15)

Regarding claim 4:

The rejection of claim 1 is incorporated, and further, Schmeidler discloses the user selecting the proper icon or alias to start the streamed application program as claimed ("The SCDP client may be implemented as an application executable on operation system, e.g., a Windows application..." in col. 10 lines 28-30. The user would launch the windows application by selection the icon.)

Regarding claim 5:

The rejection of claim 1 is incorporated, and further, Schmeidler discloses obtaining a subscription to said streamed application program from a subscription server before installation of said streamed application program begins as claimed (Note at least Figure 4A and the corresponding sections of the disclosure.)

Regarding claim 6:

The rejection of claim 1 is incorporated, and further, Schmeidler discloses obtaining a license for said streamed application program from a license server before installation of said streamed application program begins as claimed (Note at least Figure 4A and the corresponding sections of the disclosure.)

Regarding claim 7:

The rejection of claim 6 is incorporated, and further, Schmeidler discloses an encrypted access token upon acknowledgement of a valid license as claimed ("upon completion of the purchase negotiation…SCDP client software…obtains an authorization token and keying material from a Conditional Access Server…" in col. 2 lines 47-50)

Regarding claim 8:

The rejection of claim 7 is incorporated, and further, Schmeidler discloses the client passing the encrypted access token to a server for validation before requesting application pages from the server as claimed (Note at least Figure 4B and the corresponding sections of the disclosure)

Regarding claim 9:

The rejection of claim 1 is incorporated, and further, Schmeidler discloses during the uninstallation of said streamed application program from said client, said file redirection means removes said streamed application program's file mapping data from said file mapping database as claimed ("unmount or disconnect the file system…as a result operating system requests are not longer redirected to the locally stored registry entries. Both the locally stored registry entries and any data blocks which have been cached locally may be either erased or over written…" in col. 16 lines 54-59)

Regarding claim 10:

The rejection of claim 1 is incorporated, and further, Schmeidler discloses during the uninstallation of said streamed application program from said client, said registry interception means removes all

of said streamed application program's registry mapping data from said registry database as claimed

("unmount or disconnect the file system…as a result operating system requests are not longer

redirected to the locally stored registry entries. Both the locally stored registry entries and any data

blocks which have been cached locally may be either erased or over written…" in col. 16 lines 54-

59)

Regarding claim 11:

The rejection of claim 1 is incorporated, and further, Schmeidler discloses during the uninstallation

of said streamed application program from said client, said application page prefetching means

removes all of said streamed application program's application pages from said application page

cache as claimed ("unmount or disconnect the file system…as a result operating system requests are

not longer redirected to the locally stored registry entries. Both the locally stored registry entries and

any data blocks which have been cached locally may be either erased or over written…" in col. 16

lines 54-59)

Regarding claim 12:

The rejection of claim 1 is incorporated, and further, Schmeidler discloses during the uninstallation

of said streamed application program from said client, said proper icons, aliases, and description are

removed from said client as claimed ("unmount or disconnect the file system…as a result operating

system requests are not longer redirected to the locally stored registry entries. Both the locally stored

registry entries and any data blocks which have been cached locally may be either erased or over

written…" in col. 16 lines 54-59. Further, "there is no remaining evidence the title ran on the host

client system. No files associated with the title are left on the host system harddrive…" in col. 15

lines 48-51. The associated icons would inherently be removed because all files associated are
removed.)

Regarding claims 13-36:

Claims 13-24 and claims 25-36 are directed to an apparatus and a program storage medium readable
by a computer embodying a program of instructions executable by the computer for performing the
process of claims 1-12, respectively, and are rejected for the reasons set forth in connection with
claims 1-12, respectively.

Regarding claim 37:

Schmeidler teaches:

- a process for installing a streamed application program on a client system and executing said
  streamed application program on said client while concurrently streaming portions of said
  streamed application program from a server in a computer environment (Note at least
  Figures 2a and 2b and the corresponding sections of the disclosure)

- providing file redirection means on said client for redirecting file accesses from said client's
  local file system to the streaming server's file system ("The launcher and ARFSD VxD
  mount the file system...a facility within the file manager...allows the file directory and
  content of a remotely located file to be "mounted" or accessed over a computer network,
  thereby creating a "virtual drive" from which data can be accessed" in col. 16 lines 14-22.)

- providing a file mapping database stored persistently on said client, wherein said file
  mapping database contains a bi-directional mapping of the client file system to the streaming
  server file system, wherein said file redirection means performs said redirection using said

file mapping database (Note Figure 6 and the corresponding sections of the disclosure. "The

launcher and ARFSD VxD mount the file system...a facility within the file manager...allows

the file directory and content of a remotely located file to be "mounted" or accessed over a

computer network, thereby creating a "virtual drive" from which data can be accessed" in

col. 16 lines 14-22. The remote mapping facility in the file manager would inherently contain

a database to keep track of locations in the remote drive.)

- providing registry interception means on said client for intercepting all registry calls on said

  client and redirecting calls that manipulate certain registries to an alternate path (Note at least

  Figure 6, items 602 and 608 and the corresponding sections of the disclosure)

- providing a registry database stored persistently on said client (Note at least Figure 6, item

  602 and the corresponding section of the disclosure)

- wherein said registry database contains mappings of original registry paths to new alternate

  registry paths, wherein said registry interception means uses said registry database to redirect

  registry calls ("the launcher and ARFSD VxD mount the file system...and store the

  associated registry entries on the local drive..." in col. 16 lines 14-16. Further, "the ARFSD

  VxD starts intercepting such operating requests...the calls, where applicable, are satisfied

  with entries from the list of registry entries stored locally..." in col. 16 lines 43-46. Note

  Figure 6 and the corresponding sections of the disclosure.)

- providing an application page cache on said client ("the SCDP client creates a directory for

  local storage under the SCDP install directory" in col. 17 lines 20-21)

- providing application page prefetching means on said client for requesting application pages

  of said streamed application from said server ("the VxD retrieves the data blocks from the

  RAFT server in a read-ahead manner and caches the datablocks..." in col. 15 lines 14-15)

- wherein during execution of said streamed application program said streamed application program generating page requests, said application page prefetching means requests application pages from said server that are not resident in said application page cache and places the pages in the cache ("the VxD retrieves the data blocks from the RAFT server in a read-ahead manner and caches the datablocks..." in col. 15 lines 14-15)

substantially as claimed.

Regarding claim 38:

The rejection of claim 37 is incorporated, and further, Schmeidler discloses receiving an installation information block for said streamed application program from said server as claimed ("retrieving the requested blocks of briq data from the RAFT server...the SCDP client software creates an installation abstraction..." in col. 3 lines 2-9)

Regarding claim 39:

The rejection of claim 38 is incorporated, and further, note the rejection regarding claim 3.

Regarding claim 40:

The rejection of claim 38 is incorporated, and further, Schmeidler discloses wherein said registry database is updated with said streamed application program's registry mapping data obtained from said installation information as claimed ("the launcher and ARFSD VxD mount the file system...and store the associated registry entries on the local drive..." in col. 16 lines 14-16. Further, "the ARFSD VxD starts intercepting such operating requests...the calls, where applicable,

are satisfied with entries from the list of registry entries stored locally…" in col. 16 lines 43-46. Note

Figure 6 and the corresponding sections of the disclosure.)

Regarding claim 41:

The rejection of claim 38 is incorporated, and further, Schmeidler discloses wherein said file

mapping database is updated with said streamed application program's file mapping data obtained

from said installation information as claimed (Note Figure 6 and the corresponding sections of the

disclosure. "The launcher and ARFSD VxD mount the file system…a facility within the file

manager…allows the file directory and content of a remotely located file to be "mounted" or

accessed over a computer network, thereby creating a "virtual drive" from which data can be

accessed" in col. 16 lines 14-22)

Regarding claim 42:

The rejection of claim 37 is incorporated, and further, Schmeidler discloses wherein said application

page prefetching means initially populates said application page cache with an initial set of

application pages when said stream application program is installed on said client as claimed ("the

creator program combines the selected files and other information and generates as an output a file

system in the form of a briq…" in col. 16 lines 2-4. Further, "mounting of the file system may result

in caching all or a portion of the data blocks from a briq which contain the title content…" in col.

16 lines 25-27)

Regarding claim 43:

The rejection of claim 37 is incorporated, and further, note the rejection regarding claim 5.

Regarding claim 44:

The rejection of claim 37 is incorporated, and further, note the rejection regarding claim 6.

Regarding claim 45:

The rejection of claim 44 is incorporated, and further, note the rejection regarding claim 7.

Regarding claim 46:

The rejection of claim 45 is incorporated, and further, note the rejection regarding claim 8.

Regarding claims 47-66:

Claims 47-56 and 57-66 are directed to an apparatus and a program storage medium readable by a computer embodying a program of instructions executable by the computer for performing the process of claims 37-46, respectively, and are rejected for the reasons set forth in connection with claims 37-46, respectively.

Conclusion

7.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a.   **U.S. Publication 2002/0078203 A1 discloses a method for streaming applications from a server to a client, based on subscriptions and utilizing tokens for authorization.**

8.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trent J Roche whose telephone number is (703)305-4627. The examiner can normally be reached on Monday - Friday, 9:00 am - 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (703)305-9662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Trent J Roche
Examiner
Art Unit 2124

TJR

KAKALI CHAKI
SUPERVISORY PATENT EXAMINER
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